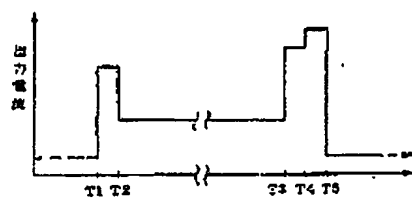
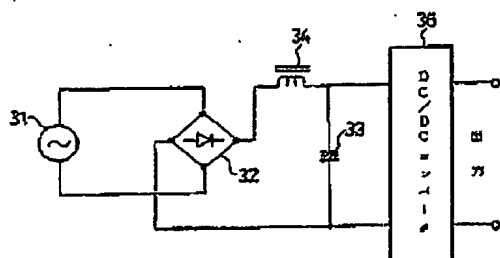


第 4 图

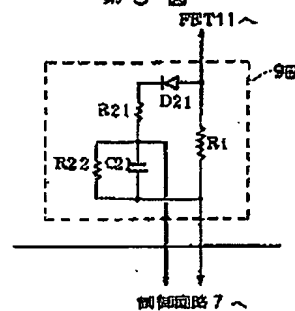


第 7 图

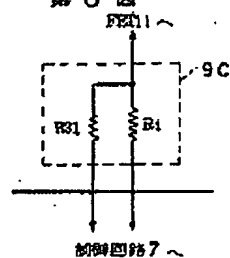


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第 5 图



第 6 图





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III

(10) Patent No.: US 6,500,152 B1
(45) Date of Patent: Dec. 31, 2002

(54) DEVICE FOR INTRODUCING FIBRIN ADHESIVE INTO A PUNCTURE CHANNEL

5,728,132 A 3/1998 Van Tassel et al.

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FOREIGN PATENT DOCUMENTS

(73) Assignee: White Spot AG, Baar (CH)

EP 0 482 350 A2 4/1992
FR 2 378 528 8/1978
WO WO 94/28798 12/1994

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

* cited by examiner

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Primary Examiner—Anhtuan T. Nguyen

(22) PCT Filed: Jun. 22, 1999

Assistant Examiner—Michael M Thompson

(86) PCT No.: PCT/CH99/00273

(74) Attorney, Agent, or Firm—Pauley Petersen Kinne & Erickson

§ 371 (c)(1),
(2), (4) Date: **Dec. 28, 2000**

(57) ABSTRACT

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According to the invention a working cannula (1) is fixedly joined to a medical coupling element (3) which is placed onto a sealing cannula (2) and can be screwed onto same. The medical coupling element (3) has an actuating lever (34) and a covering plate (39). When the medical coupling element (3) is rotated by means of the actuating lever (34) in relation to the sealing cannula (2), the working cannula (1) is partially pulled into the sealing cannula (2) to such a depth that inlet openings (11) in the proximal end of the working cannula (1) are drawn into a sealing chamber (14) at the proximal end of the sealing cannula (2). This ensures that the outlet openings (6) through which, for example, fibrin adhesive can be administered into the puncture channel, do not enter an artery. In the insertion position the covering plate (39) simultaneously covers the sealing tube (5) through which the sealing material is injected.

(30) Foreign Application Priority Data

Jul. 2, 1998 (CH) 1415/98

(51) Int. Cl.⁷ A61M 5/178

(52) U.S. Cl. 604/164.07; 606/213; 604/60

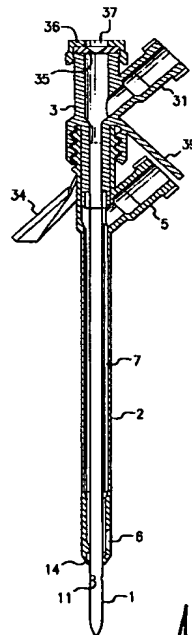
(58) Field of Search 604/15, 39-43, 604/506, 507, 508, 510, 60, 96.01, 168.01, 171, 523, 529, 533, 286, 285, 164.07; 606/108, 213, 215, 216

(56) References Cited

U.S. PATENT DOCUMENTS

5,676,689 A * 10/1997 Kensey et al. 604/168.01

9 Claims, 4 Drawing Sheets



AA

PD040008

CITED BY APPLICANT